

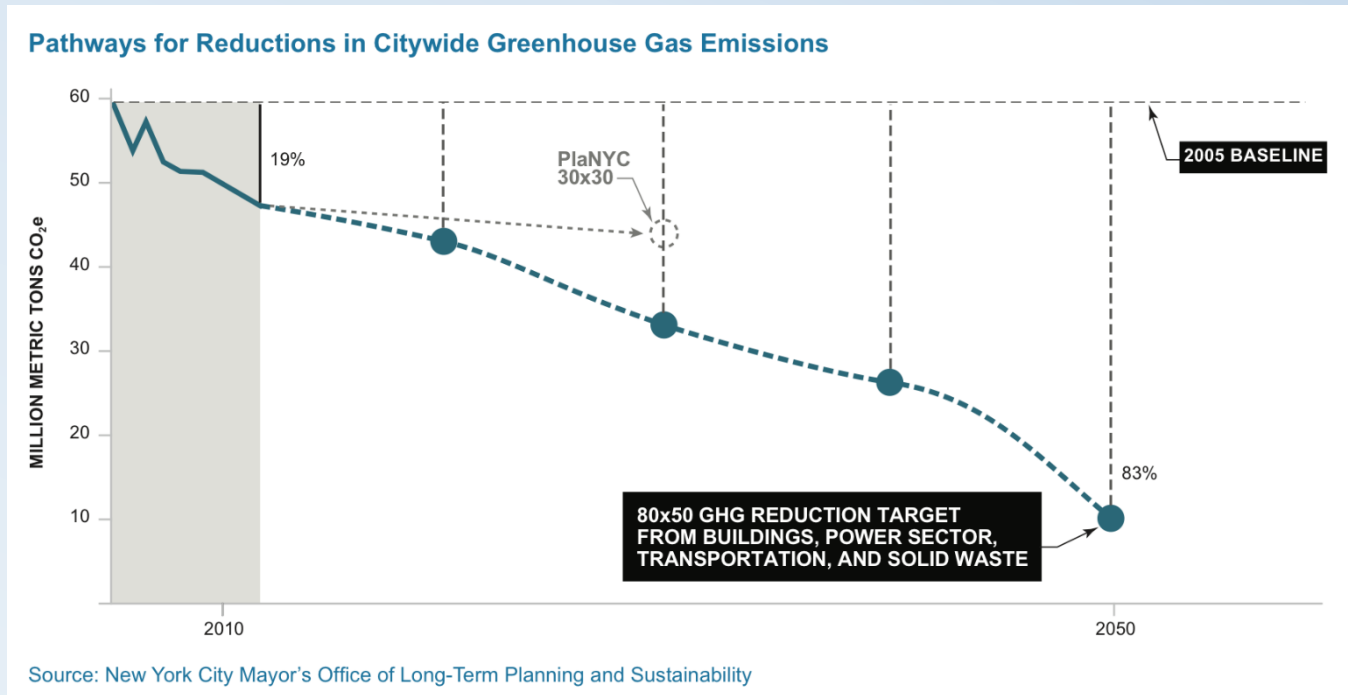
Building Energy Policy in NYC

The Existing Building
Challenge

- Policy in New York City
- Alterations Pilot
- Challenges and Findings

Existing Buildings and Energy Code in NYC

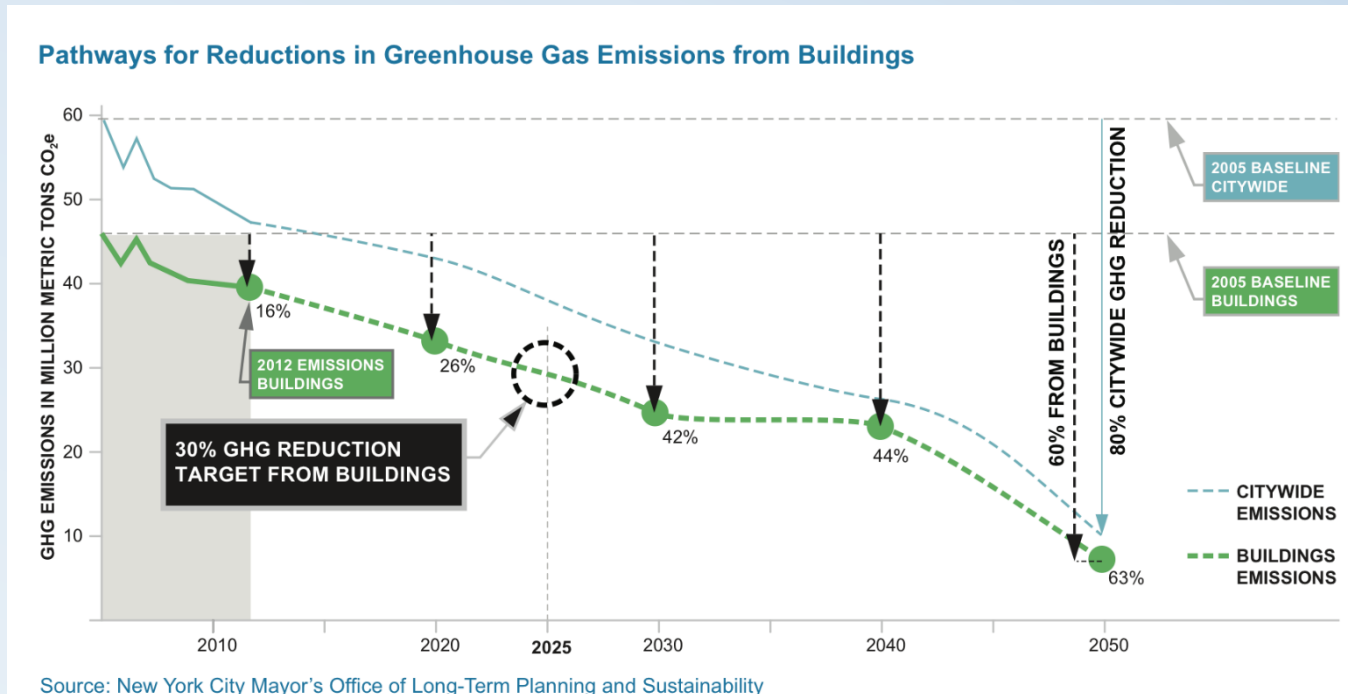
- Local Law 66 of 2014 (80x50)
 - A local law to amend the Administrative Code of the city of New York, in relation to reducing greenhouse gases by eighty percent by 2050.



Mayors Office, *One City Built to Last Plan*, September 2014

Carbon Policy in NYC

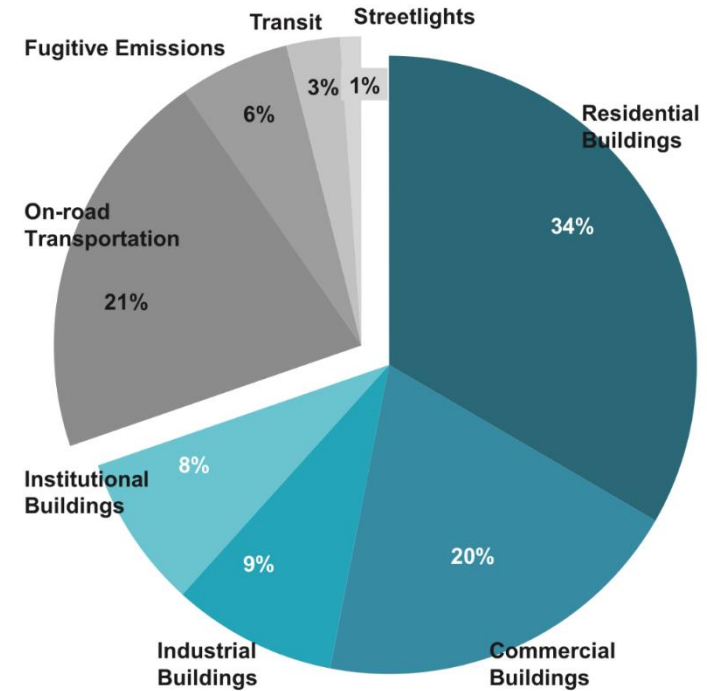
- Local Law 66 of 2014 (80x50)
 - A local law to amend the Administrative Code of the city of New York, in relation to reducing greenhouse gases by eighty percent by 2050.



Carbon Policy in NYC

- The 80x50 Plan set key policies and programs:
 - We will make our public buildings models for sustainability.
 - We will create a thriving market for energy efficiency and renewable energy.
 - We will develop world class green building and energy codes.

New York City 2013 Greenhouse Gas Emissions by Sector



Source: New York City Mayor's Office of Long-Term Planning and Sustainability

Mayors Office, *One City Built to Last Plan*, September 2014

Carbon Policy in NYC



Public Building Energy Policy

- Implement deep retrofits
- Expand solar power on City rooftops

Create a market for energy efficiency

- Retrofit Accelerator
- Train building operators

Raise the standards for the energy code

- More stringent Energy Code
- Increase enforcement

Carbon Policy in NYC

- Local Law 31 of 2016 (EUI targets for capital projects)
 - A local law to amend the New York city charter, in relation to low energy intensity building requirements for certain capital projects.
 - LEED v4 GOLD
 - New buildings and additions- **38 kBtu/sf/yr** OR 50% better than ASHRAE 90.1-2013
 - Substantial renovations- **42 kBty/sf/yr** OR 50% better than ASHRAE 90.1-2013

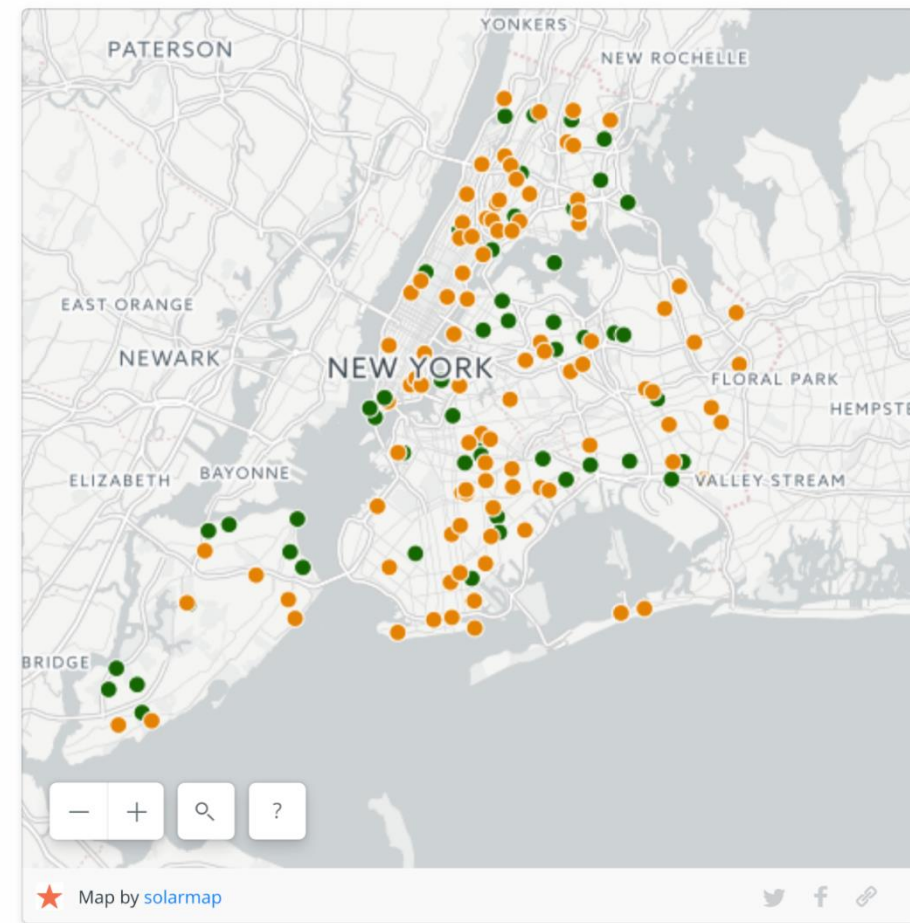


Source: NYC Department of Design and Construction, Queens Library at Hunters Point by Steven Holl

Public Building Energy Policy in NYC

- Local Law 24 of 2016
 - 100 MW solar target for City buildings
- Established targets for installed solar and energy storage capacity for NYC in September 2016
 - 1,000 MW of installed solar by 2030
 - 100 MW-hrs of energy storage by 2020

Current Solar Installation Map



Source: NYC Department of Citywide Administrative Services, Energy Management Division

Renewable Energy Policy in NYC



**Free, personalized
advisory services that
streamline the process of
making energy efficiency
improvements.**

Part of New York City's commitment to fight
climate change by significantly reducing
greenhouse gas (GHG) emissions.

NYC
Mayor's Office
of Sustainability
Mayor Bill De Blasio

#ONENYC

Free Help. Simple Fixes. Big Results.

- Increase demand for efficiency upgrades
- Unique insights into building needs
- Trusted advisor to buildings
- Complement market resources



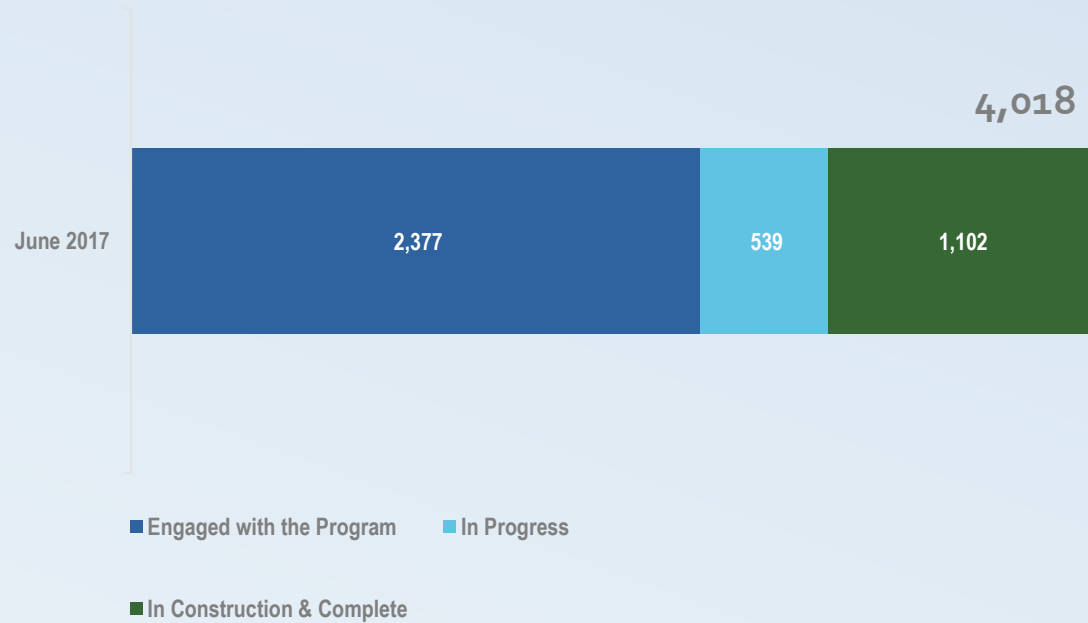
**GET IN TOUCH
TODAY!**



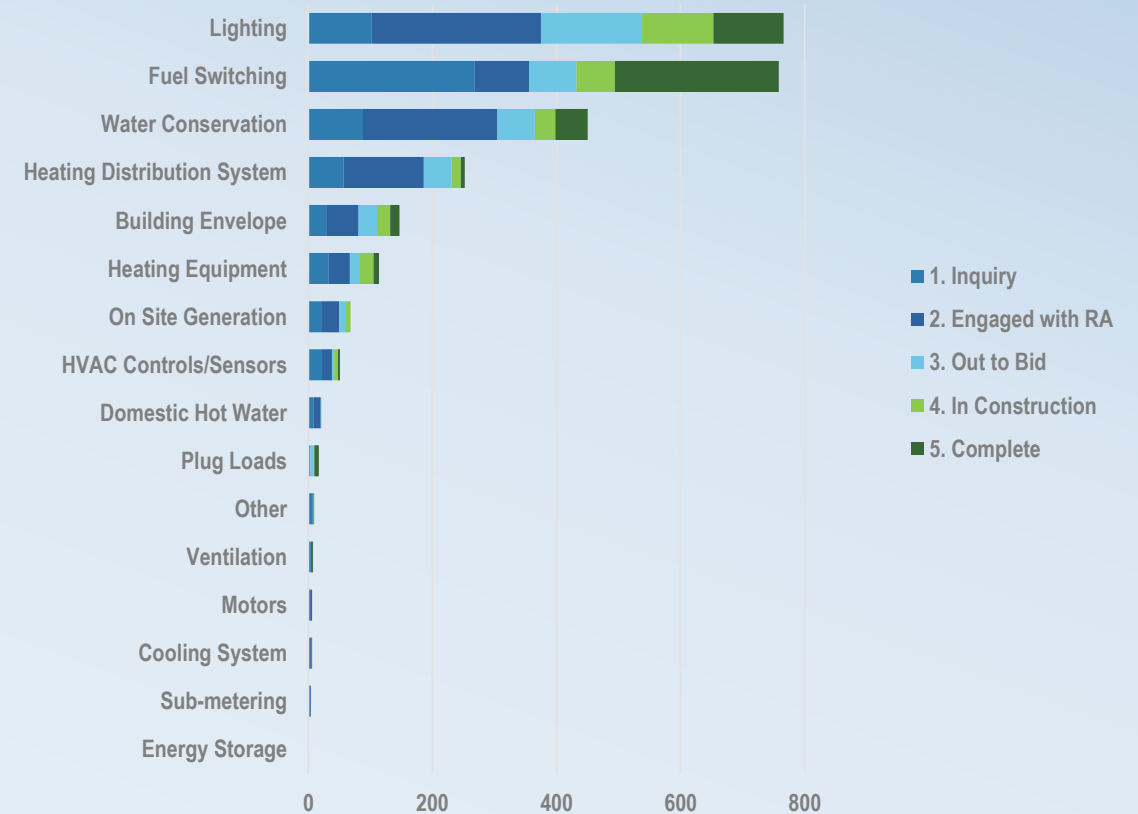
nyc.gov/RetrofitAccelerator
212-656-9202

Program Progress

Retrofit Accelerator Participants



Retrofit Accelerator Projects



- Introduction 13 of 2014
 - A Local Law to amend the administrative code of the city of New York, in relation to requiring the **base building systems of certain buildings to be operated by individuals with a certificate in building energy efficiency** from an approved program.
 - Applies to buildings 50,000 sq.ft. and greater

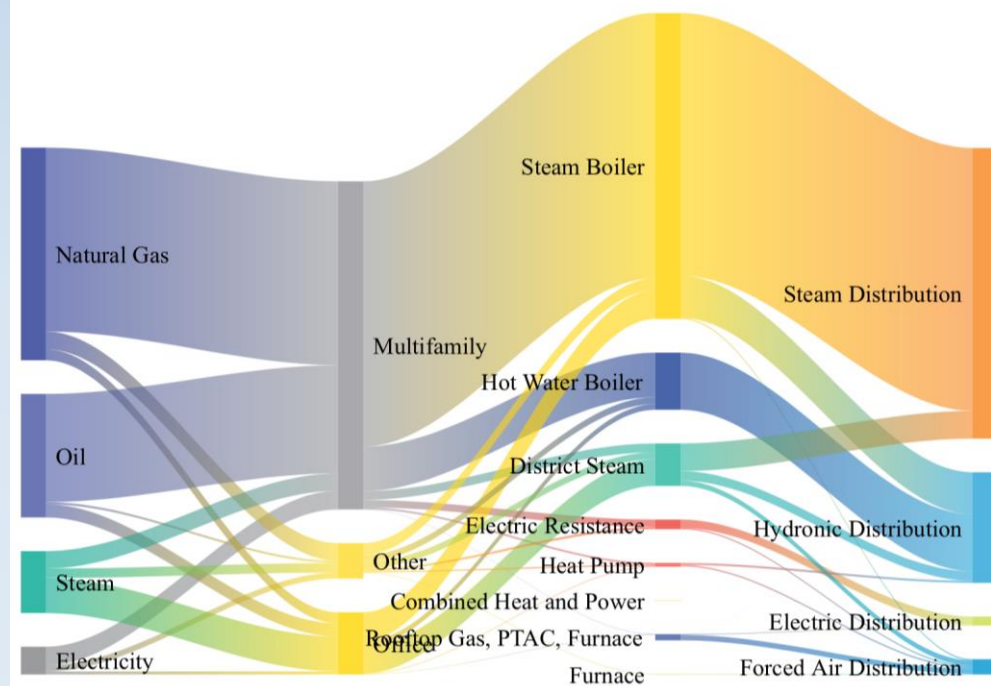


Create a market for Energy Efficiency

- Local Law 84 of 2009
 - Annual energy and water benchmarking for buildings 50,000 sq.ft. and greater
 - 8% overall energy use reduction in largest buildings since 2010
- Local Law 133 of 2016
 - Expanded benchmarking to buildings 25,000 sq.ft. and greater

HOW LARGE BUILDINGS ARE HEATED

Space heating is New York's largest single energy demand. Auditing data help us track the flow from energy sources, through the building types that use them, to the heating systems in those buildings, and finally how that heat is distributed. Hover over any pathway to follow its progress through our buildings.



Source: *New York City's Energy & Water Use 2013 Report* by Urban Green Council and NYU Center for Urban Science + Progress, August 2016

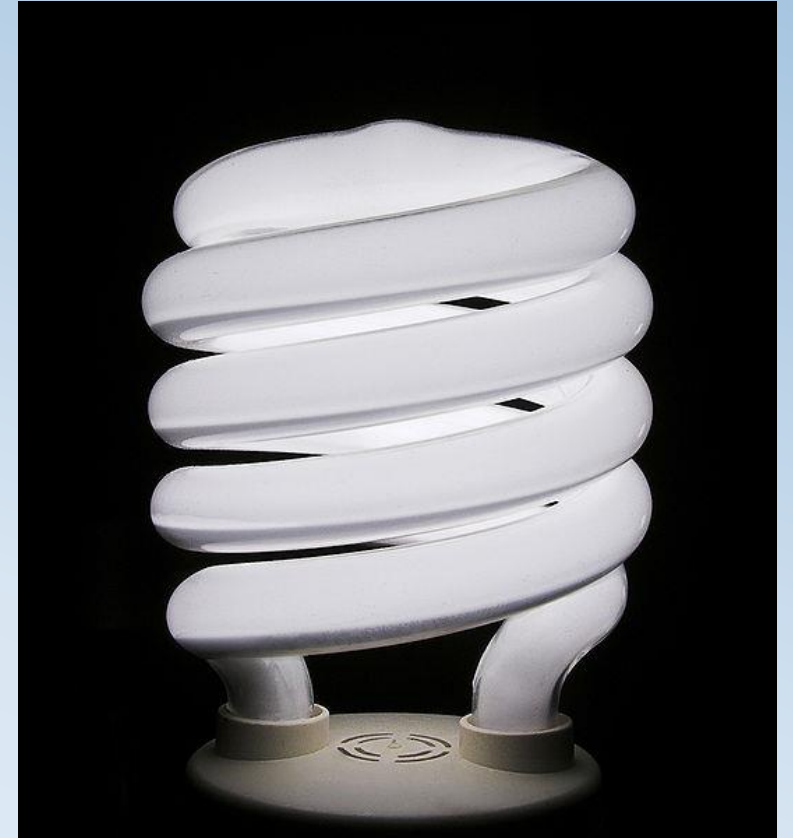
Building Energy Policy in NYC

- Local Law 87 of 2009
 - Energy audit and retro-commissioning for buildings 50,000 sq.ft. and greater, every ten years
 - Only minor energy savings impacts to date

Building Energy Policy in NYC



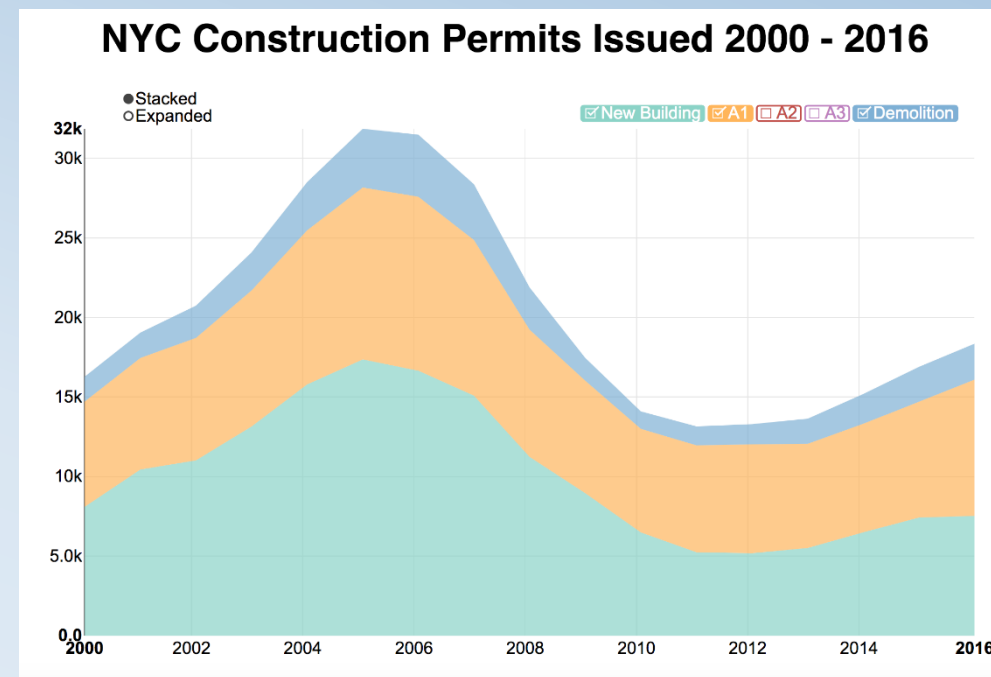
- Local Law 88 of 2009, Local Law 1165 of 2016
 - Lighting upgrades for buildings 25,000 sq.ft. and greater, every ten years
 - Sub-metering of tenant spaces of 5,000 sq.ft. or full floor



Source: Wikipedia Commons, photo by Piccolo Namek.

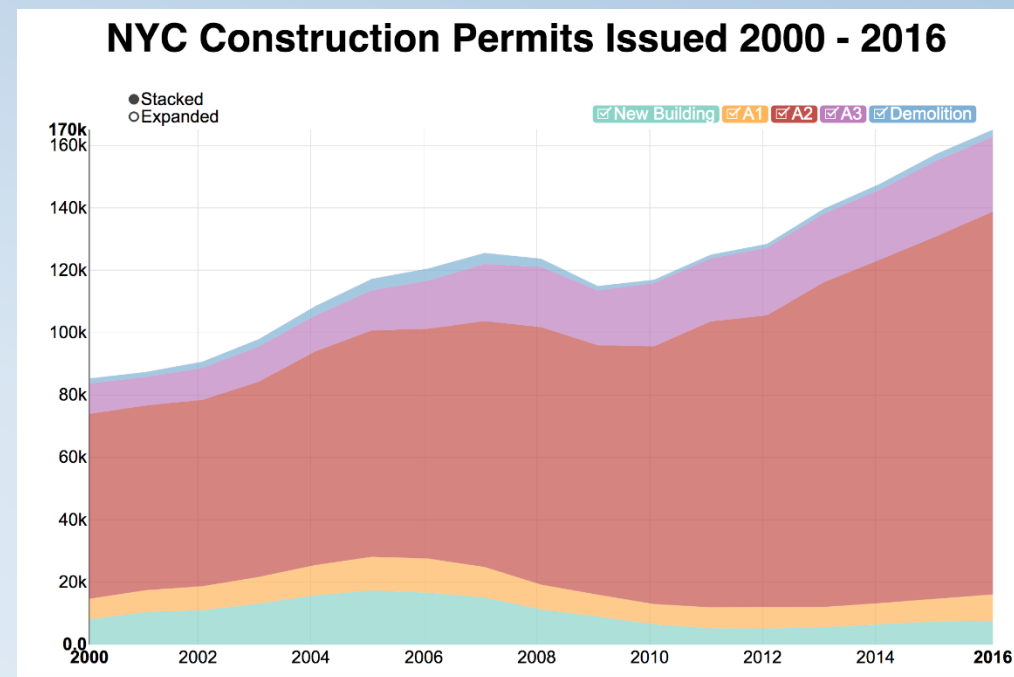
Building Energy Policy in NYC

- Local Law 85 of 2009
 - NYC establishes its own Energy Code
 - Establishes the Energy Code Unit in 2013, starting with New Building applications
 - One City Built to Last Plan calls for increased enforcement in 2014



Building Energy Policy in NYC

- Local Law 85 of 2009
 - NYC establishes its own Energy Code
 - Establishes the Energy Code Unit in 2013, starting with New Building applications
 - One City Built to Last Plan calls for increased enforcement in 2014



Building Energy Policy in NYC

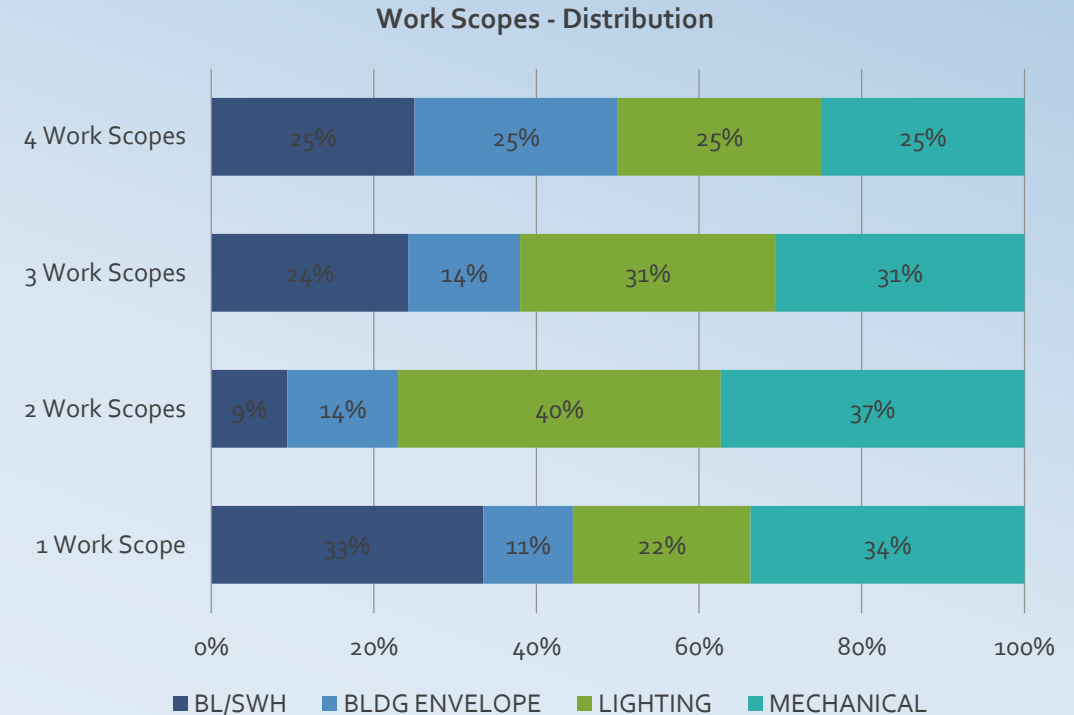
- 2015 DOB Alterations Pilot
 - 12 month study to establish a review strategy for alterations to existing buildings
 - Test filters for high-risk energy projects (current process and future process considerations)
 - Test inspections strategies for agency *audits*
 - “test” compliance in the alterations market

Building Energy Policy in NYC



- Pilot Filters

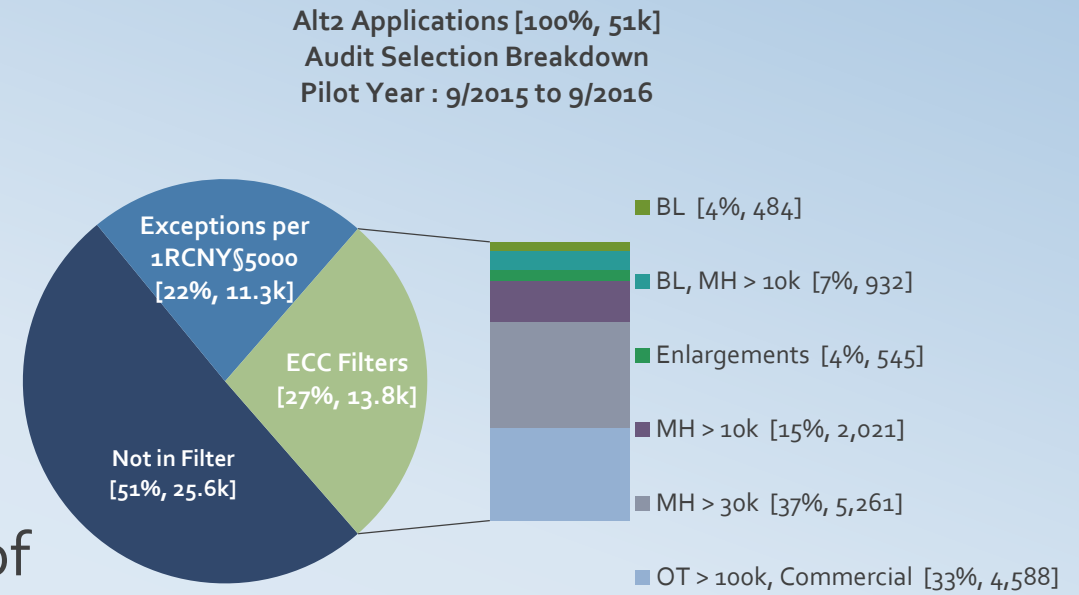
- Filters found to be successful
 - Boiler and Mechanical Equipment work types
 - Horizontal enlargements (not requiring a new C of O)
 - “Other” work type with cost of project over \$100K
- Narrowed the universe from 39,000 projects to 14,000
- “ePAC” data tool



Building Energy Policy in NYC

Findings

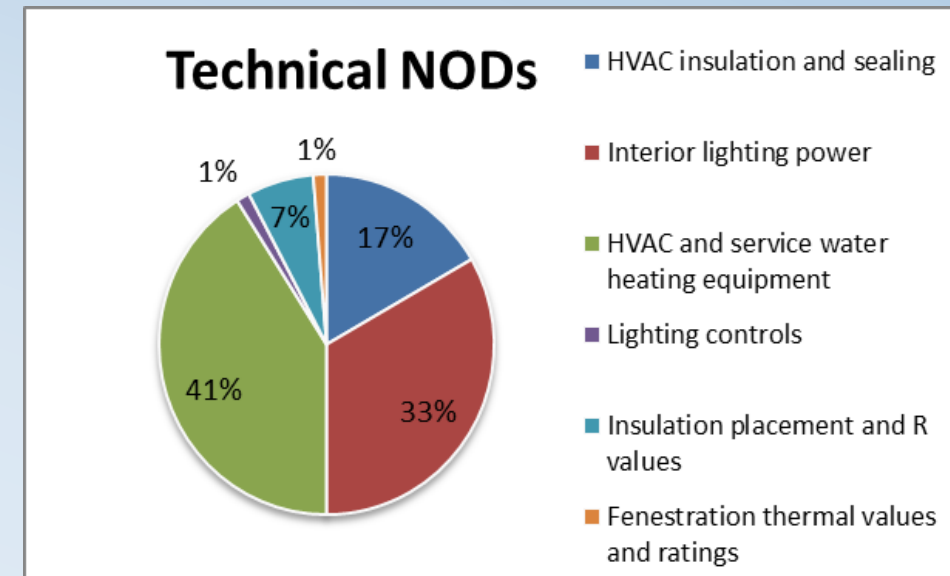
- Noncompliance issues in plan examination
 - Boiler and Mechanical systems-controls
 - Lighting systems- controls
 - Façade alterations were falling out of the filters
- 75% of projects had technical objections in the first review



Building Energy Policy in NYC

Findings

- Noncompliance issues in inspections
 - Many issues were related to post-approval drawing changes
 - Most deficiencies identified in the field could be remedied
- 36% of projects received a “Notice of Deficiency”



Building Energy Policy in NYC

Strategies moving forward

- Applying the filters that were successful
 - Creating logic in the new all-electronic application process to further narrow the universe
 - Auditing by applicant
 - Auditing “non-filtered” jobs
- Inspecting highest-risk jobs
- Auditing the third-party inspectors



Source: Wikipedia Commons, photo by Beyond My Ken.

Building Energy Policy in NYC

- Intro. 1629 of 2017 (EUI targets for builds 25,000 sq.ft. And greater)
 - A local law to amend the New York city Administrative Code, on adoption of a more stringent energy efficiency requirements for buildings and energy use intensity requirements for new and substantially reconstructed buildings
 - Adopt a 2019 and 2022 code that is 20% more stringent than ASHRAE 90.1
 - 2025- New buildings and additions- **38 kBtu/sf/yr**
 - 2025- Substantial renovations- **42 kBtu/sf/yr**

Building Energy Policy in NYC



Thank-you!

Questions?

Email us at energycodes@buildings.nyc.gov
gbocra@buildings.nyc.gov and ehoffman@buildings.nyc.gov